

REMARKS

The claims in the application are Claims 1 and 28-49.

Favorable reconsideration of the application in view of the following remarks is respectfully requested.

In the Office Action, the rejection of Claims 1 and 28-49 under 35 U.S.C. §103(a) as obvious over U.S. Pat. No. 4,318,950 to Takashi et al in view of European Patent No. 0 613 919A1 to Ueda et al and U.S. Pat. No. 5,233,924 to Ohba et al. have been maintained. In maintaining the rejection the Examiner has stated Takashi et al discloses it is well known in the art to make synthetic papers comprising oriented thermoplastic laminates. The Examiner further stated inorganic fillers may be added to the thermoplastic resin prior to stretching in order to roughen the surface and render the film receptive to pencil, pen, and crayon markings and it is well known in the art antistatic properties are desired in synthetic paper products. The Examiner acknowledges Takashi et al does not teach the desired level of opacity of a synthetic paper. To correct this factual defect, Examiner relied on Ohba and takes the position it would have been obvious to one of ordinary skill in the art to alter the opacity of the film in Taskashi to do what the Applicants have done.

In the *Response to Argument* section of the Office Action, the Examiner acknowledges the filing of the fourth supplemental declaration describing the "side-by-side" comparison and results obtained from the experiments described therein but asserts either (1) the claimed invention is obvious, or (2) no conclusion can be drawn from the results of the experiments outlined in the declaration since "it is unclear

what variables are responsible for the showing of differences between the surface resistivity and/or paper feeding properties of the examples, i.e., Examples 2(as in Taskashi) and 4 (as in the present invention). (See Office Action page 8).

For the following reasons discussed below, the Applicants respectfully disagree. Prior to making the argument that the present invention as claimed is non-obvious over the cited art, a brief summary of the state of the prior art and the problems associated with the prior art is provided.

Synthetic papers having a low-weight antistatic agent kneaded directly into a polypropylene resin which is then extruded into a film do not exhibit long-lasting antistatic properties. When a low-molecular weight antistatic agent is coated on the surface of a film, the paper undesirably loses its antistatic effect upon contact with water; therefore synthetic papers having low-molecular weight antistatic agents coated on their surface as a film retain their antistatic properties for even a shorter period of time than a synthetic paper having low-weight antistatic agent kneaded directly into a polypropylene resin. In addition, both synthetic papers described above having antistatic agent film cannot be used in offset printing or flexography, although they are printable by gravure printing.

To overcome this problem, synthetic papers containing high-molecular weight permanent antistatic agents of the kneading type have been produced in the prior art. As a result, the period over which the antistatic properties of the synthetic paper would last in these papers was extended, but the synthetic paper still cannot be printed on by offset printing or flexography.

In view of the existing problems, after extensive studies by the inventors of the present invention, it was determined stretching a film comprising, as a base material, specific resin components and oxidizing the stretched film by corona discharge treatments, plasma treatment, or the like, as described in the present claims, imparts favorable antistatic properties to the synthetic paper and improves the printing ink adhesion thereon. Since the stretched and oxidized synthetic paper of the present invention contain ultra-fine cracks on the surface of the oriented polypropylene crystals in the film matrix, the permanent antistatic agent incorporated into the synthetic paper are exposed through kneading to the surface of the film. Accordingly, a synthetic paper according to the present invention having antistatic agents for prolonged periods of time that can be printed on by gravure, offset printing or flexography was produced. The synthetic paper of the present invention, as shown in the previously submitted declarations, is not taught or suggested by the combination of prior art cited in the 35 U.S.C. §103 rejection stated above.

The non-obviousness of the present invention is further indicated by the side-by-side comparison to Takashi et al and the present invention as described in the fourth supplemental declaration. In this declaration Experiment 1 was conducted in the same manner as Example 12 of U.S. Patent No. 4,318, 950 (Takashi et al.). Experiment 2 set forth in the accompanying Declaration was prepared in the same manner as in Experiment 1 of the accompanying Declaration, except PHOSPHANOL RL-20, a high-molecular weight antistatic agent was used instead of the low-molecular weight antistatic agent. The results are presented in tables 1 and 2 of the Declaration.

Experiment 3 of the Declaration was prepared in the same manner as Experiment 1 of the accompanying Declaration, except instead of the low molecular weight antistatic agent at 0.7 parts by weight, 20 parts by weight was used. In addition, after laminating the paper-like layer to the base layer, the low molecular weight antistatic agent was bled out of the paper-like layer and the surface tackiness was generated on the forming roll. The results are set forth in tables 1 and 2 of the Declaration.

It is clear from the results of the side-by-side experiments the effects of the present invention can not be obtained simply by "changing only the kind and amount of the antistatic agent" in the synthetic paper of Takashi et al. This is further evident by the Examiner's own statement that no conclusion can be reached from the comparison of the results of experiment 2 (Takashi) and experiment 4 (prepared as in Example 1 of the present invention) since "multiple variables are altered between examples 2 and 4." (See Office Action, page 8 para. #2). This statement directly contradicts the Examiner's conclusion that the present invention is obvious over the cited prior art. If this was true, then the effect of the variables should be obvious and the comparison can be made. In other words, if this was true, then any variables between the claimed invention represented by experiment 4 and that of Takashi in example 2 should also be obvious and should not impede interpretation of the results set forth in the declaration.

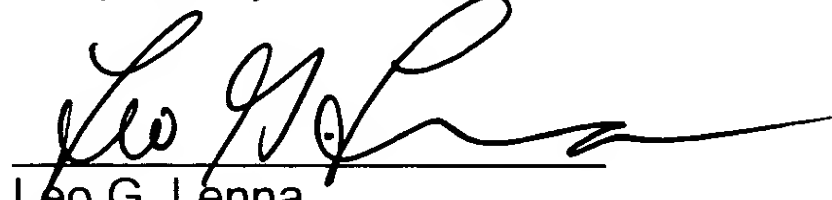
In view of the foregoing, it is respectfully asserted that the combination of Takashi in view of European Patent No. 0 613 919A1 to Ueda et al and U.S. Pat. No. 5,233,924 to Ohba et al. does not teach or suggest the synthetic paper

recited in claims 1 and 28-49 of the present invention. Accordingly, in view of the forgoing remarks, it is respectfully submitted the present declaration does in fact indicate that the non-obvious synthetic paper of the present invention has superior properties over the cited prior art, and the fourth declaration should be considered and the rejection of claims 1, and 28-39 be reconsidered and withdrawn.

Should the Examiner have any questions, then it is respectfully requested the undersigned attorney be contacted at the earliest convenience to discuss the present application. A petition for an automatic one month extension of time for response under 37 C.F.R. §1.136(a) is enclosed in triplicate together with the requisite petition fee and fee for additional claims introduced herein.

Early favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Leo G. Lenna", written over a horizontal line.

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